DOCUMENT RESUME

ED 107 385 PS 007 999

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TITLE The Influence of Family Size on Learning Readiness Patterns of Socioeconomically Disadvantaged Preschool Blacks.
INSTITUTION University of Northern Iowa, Cedar Falls.
SPONS AGENCY Department of Health, Education, and Welfare, Washington, D.C.
BUREAU NO BR-6-8526
PUB DATE [74]
GRANT OEG-0-8-055780-2937; OEG-3-7-068526-2086
NOTE 11p.; For related document, see PS 007 867

EDRS PRICE MF-$0.76 HC-$1.58 PLUS POSTAGE
DESCRIPTORS Academic Achievement; Concept Formation; Educational Assessment; Expressive Language; *Family Influence; Memory; *Negro Youth; Preschool Children; *Preschool Education; *Readiness (Mental); Skill Development; *Socioeconomic Influences; Standardized Tests
IDENTIFIERS *Family Size

ABSTRACT

Preschool readiness measures were secured on 35 pairs of disadvantaged 2- to 3-year-old lower SES black children, representing large and small families, to determine the impact of family size on readiness profiles. The findings reveal that blacks from small families achieved significantly higher scores on 3 of the 9 skill areas: Visual Memory, Expressive Language, and Expressive Concepts. The results were reviewed in the context of Inhelder-Piaget formulations concerning the early growth of the intellect, which provide a possible explanation of how intrafamily dynamics may depress the learning of black lower SES preschool children. It is suggested that replication and longitudinal studies are needed to better ascertain the long-term social and educational implications of these findings. (Author/CS)

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THE INFLUENCE OF FAMILY SIZE ON LEARNING READINESS PATTERNS OF SOCIOECONOMICALLY DISADVANTAGED PRESCHOOL BLACKS

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Problem

One of the more perplexing aspects of the American social scene was recently discussed by Moynihan[10] who noted conflicting "up and down" trends of black Americans. Whereas many low SES blacks succeed in achieving dramatic SES gains (the "ups"), an increasingly large proportion of low SES blacks appears to be becoming inured to poverty (the "downs"). In Moynihan's view, this is one of the most pressing problems facing the nation. Research may ultimately reveal that these "up and down" trends are related to within-family influences. If so, it is important that such influences be identified.

It is possible that family size may be one of many significant influence on cognitive development. For example, parents with a large family may spend less time with individual children than do parents with few children. If so, this may have an effect on preschool children's cognitive profiles. Should this, in general, be true, then perhaps compensatory programs should consider family size when developing strategies designed to meet the learning needs of individual low SES children. Moreover, it appears that within-family influences have their greatest impact during the preschool years.[14]

Knowledge of how within-family influences shape cognitive profiles during the early years may therefore increase the feasibility of formulating more

effective intervention programs.[7,9] To the writers' knowledge, no study has specifically sought to ascertain whether, or how, family size may influence the readiness profiles of preschool blacks equated on the basis of SES disadvantage. This study was designed to assess possible interactive aspects of family size and learning patterns of preschool lower SES black children.

Method

Study Setting: As part of Home Start, a Title III ESEA project,[14] 206 preschool black children residing in a medium-scope Midwestern city were given the Iowa Tests of Preschool Development (ITPD). All Ss resided in school attendance areas designated as socioeconomically disadvantaged by the Office of Economic Opportunity. From this pool of 206 Ss, matched pairs were secured to assess possible relationships between family size and early learning profiles.

Subjects: Ss from large families were defined as children with 3 or more siblings; Ss from small families had 1 or 0 siblings. Children with 2 siblings were excluded from the study. SES was determined by employing the Meyers and Bean[11] Two Factor Index of Social Position which gives a weight of 7 to the head of household designated as male adult. Where no male was present, the occupation of the mother was used and a weight of 4 to the education level of head of household.

Of the 206 black Ss tested, 49 had 2 siblings and were eliminated from the study. The remaining 157 Ss included 85 which were in the lowest SES category; only these Ss were included in the present study. These potential 85 Ss were then matched, taking into consideration both sex and CA so that all matched pairs were of the same sex and did not differ in CA by more than 3 months. Using these procedures, 35 matched pairs were secured (mean CA, 34.8 and 35.0 months for Ss from large and small families, respectively; CA range 25 to 42 months).

Instrument. The ITPD is an achievement-oriented preschool instrument which was designed specifically for children from 2 to 5 years of age. For each child. the test provides a profile of learning readiness based on a modified psycholinguistic model.[13] The test consists of 4 subtests (Language, Visual Motor, Memory, Concepts), which are further divided into the following skill areas: Receptive Language, Expressive Language, Large Motor, Small Motor I (paper/pencil tasks), Small Motor II (beads and string, pegs and peg-board), Visual Memory, Auditory Memory, Receptive Concepts (involving understanding of color, size and number concepts), and Expressive Concepts (requiring the child not only to understand concepts but to employ concept terms in oral expression).

Results and Discussion

As shown on Table 1, Ss from small families significantly outperformed Ss from large families in 3 skill areas: Expressive Language, Visual Memory and Expressive Concepts. Ss from large families failed to secure significantly

------Insert Table 1 about here------

higher scores in any skill area and obtained higher scores than their small-family counterparts in only one skill area (Small Motor II). In 6 skill areas, including all Visual-Motor areas, family size was not related significantly to level of readiness competencies.

From what is known about principles of learning, it seems plausible that the 3 observed significant differences in skill area performance may be related to the pattern of intra-family stimuli as determined by family size. Two of the 3 significant differences are associated with oral expressive (Expressive Language; Expressive Concepts). This suggests that the Ss from large families

understood language and concepts as well as did their counterparts from small families. However, they could not translate their understandings into oral language. In learning, this is an important distinction since it is generally believed that conceptual mastery is most complete when subvocal (receptive) mastery is complemented by oral expression. Replication studies may reveal that Bernstein's[2] distinction between language stimulation in middle and lower class families may be essentially valid (in kind if not in degree) for distinguishing intra-family learning of lower SES black children from large and small families. Within small black lower SES families, the parents may listen more carefully to what their children say, and therefore encourage verbal expression. If so, children from small black, lower SES, families might, at a very early age, begin to enjoy success in building more extensive systems of oral expression which may become crystallized[4] and thus foster subsequent learning.

The results also disclose no apparent relationship between family size and Ss' scores in auditory memory, but significant differences in visual memory tasks, favoring Ss from small families. These results indicate that during the early years the impact of within-family stimuli may be more easily discerned on visual memory than auditory memory tasks. Replication studies may reveal that, within small families, black lower SES parents are more inclined than their counterparts in large families to encourage informal play with visual-motor and manipulative (visual) types of games and toys which foster skill development in organizing and synthesizing visual stimuli.[12]

Considered in the light of the Inhelder-Piaget[5] view of early cognitive growth, these findings indicate that the outlook for many young black low SES children from large families may be bleak. Inhelder and Piaget take the position

that during the early years there is an essential interaction between language and perception. Their rationale proposes that the child's attainment of formal cognitive operations is largely dependent on the progressive elaboration of seriation and classification, or perception and language, skills through the sensory-motor, preoperational, and concrete operational stages. They further argue that language seems to be somewhat more closely allied with classification, and perception with seriation, and that significant parallelisms, marked by similar turning points, characterize the growth of the intellect. Accordingly, it seems that optimum cognitive development is at least partially dependent upon the interactive learning involved in receptive (perceptual) and expressive (oral language) activities during the presumably crucial preschool years. This theory, supported as it is by results from this experiment, raises the possibility that family size may partially account for the "up and down" trends noted by Moynihan. Language stimulation, and opportunities for children to develop both receptive and expressive language and conceptual skills and understandings, may be related to family size and thus to the "up and down" phenomenon. Replication studies may also reveal that similar effects are observed with nonblack low SES preschool children.

Finally, these results appear to confirm the potential value in providing early diagnostic and remedial services for vulnerable children who are likely to experience later learning problems.[6] The findings also suggest that more effective compensatory programs require careful diagnosis which focuses on within-child variance.[3] Replication studies are needed to determine whether significant within-child differences in receptive and expressive skills in language and conceptual development, as well as in visual and auditory memory

tasks, serve as diagnostic clues which not only permit identification of vulnerable children, but also indicate how more effective early enrichment programs, within both home and school, may be devised.

Summary

Preschool readiness measures were secured on 35 pairs of disadvantaged 2 to 3 year old lower SES black children, representing large and small families, to determine the impact of family size on readiness profiles. The findings reveal that blacks from small families achieved significantly higher scores on 3 of the 9 skill areas: Visual Memory, Expressive Language and Expressive Concepts. The results were reviewed in the context of Inhelder-Piaget formulations concerning the early growth of the intellect, which provide a possible explanation of how intra-family dynamics may depress the learning of black lower SES preschool children. It is suggested that replication and longitudinal studies are needed to better ascertain the long-term social and educational implications of these findings.

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Footnotes

This research was supported in part by grants from the Department of Health, Education and Welfare (OEG-3-7-068526-2086, Project No. 6-8526 and OEG-0-8-055780-2937, Project No. 68-05578-0), by Title I of the Higher Education Act of 1965, Community Development Division (67-003-027), and by Research Grant 302-67, University of Northern Iowa. The author wishes to acknowledge the most helpful comments and assistance of Duane Stewart, Helen Thompson, Glenda Mabry and Agnes Walsh during the execution of the study.

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Table 1

ITPD (Level I) Skill Area Achievement Indexes of Black Children from Large (N=35) and Small (N=35) Families

	Large Family	Small Family	p
Receptive Language	91.1	100.9	NS
Expressive Language	81.1	94.1	.05
Large Motor	95.3	96.2	NS
Small Motor I	101.4	102.9	NS
Small Motor II (pegs)	94.0	90.3	NS
Visual Memory	89.9	112.3	.01
Auditory Memory	83.1	85.7	NS
Receptive Concepts	66.2	68.3	NS
Expressive Concepts	71.3	81.3	.05